Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of Inquiry Regarding Carrier Current Systems Including Broadband over Power Line Systems	)	**ET Docket No. 03-104**
In the Matter of Amendment of Part 15 Regarding New Requirements and Measurement Guidelines for Access Broadband Over Powerline Systems	)	**ET Docket No. 04-37**
By W. Lee McVey, P.E. To: The Commission	)	

REPLY TO THE COMMENTS OF SUTHERN LINC, SOUTHERN TELECOM, INC., AND SOUTHERN COMPANY SERVICES, INC.

Purpose and Introduction

The following are my reply comments in response to Comments in the above two Dockets. My comments focus on the incorrect and misleading statements concerning electric distribution system control, security and operation.

My reply comments are filed with the intent of ensuring that the Commission receives

correct information about claimed enhancements to electric utility system performance through the addition of BPL. Proper operation of electric utility systems is an absolute necessity to ensure that the public health and safety are maintained. Our nation must not tolerate the type of shoddy and neglectful utility maintenance and operation which prompted the widespread outage of August 14, 2003. Indeed, cavalier or misleading assumptions could lead to beliefs that somehow safety or system reliability has been improved through application of BPL systems, which it has not, nor will it be. And even worse, that proven, highly-reliable and secure media such as multiple access and packetized radio, microwave and fiber control solutions would be abandoned in favor of clearly-inferior BPL technology, creating a lower level of power system reliability.

Specific Comments and Remarks

1. The presence of BPL will not enhance the ability of power system operators to control or provide meaningful security enhancements. This is because the very medium upon which the BPL signal depends is a continuous, uninterrupted high voltage conductor path. Electric distribution system protection equipment such as substation and line-installed circuit breakers will open all conductors in the event of a fault on any one. Hence, interrupting all BPL signal communication to and from customers and any utility-owned, controlled apparatus on the load side of such protective equipment.

2. While monitoring of steady state conditions could be employed, and even the extreme expense of some form of customer main breaker tripping or disconnect device, accessibility again depends upon the continuity of the high voltage line conductors back to the substation (or wherever the BPL signal is injected from other broadband media

such as fiber optic cable). So, monitoring and detection of BPL-dependent individual customer information would cease with an interruption to a distribution line conductor path far removed from the 10s, 100s or 1000s of electric system customers being monitored when all conditions are normal.

3. "Blackouts" as Southern incorrectly asserts,[1] do not cascade on radially-supplied distribution circuits. These circuits are not paralleled, as are most transmission lines, thereby not being subject to excessive load flows from disruption of paralleled line sections. Distribution systems that are properly designed and operated have built-in protection devices and monitoring systems to avoid overloads and operation of protective devices such as individual fuses and line circuit breakers (often called Reclosers). Infrastructure is designed based upon customer maximum electrical demand to ensure that voltage delivered to each and every customer is at all times within ANSI standards for equipment utilization. This includes proper voltage and frequency levels which are already automatically controlled at generating stations and transmission and distribution substations.

4. Southern again makes an incorrect, misleading statement that "Reclosure operations"would somehow be enhanced through use of BPL in addition to multiple access radio systems (MAS)[2] Use of line conductor integrity-dependent BPL technology is, as stated above, susceptible to interruption by substation circuit breakers and line circuit breakers. The very devices Southern proposes to use BPL to control. Control would be impossible, to the extent power and line integrity is severed and

[1] Southern Comments at 4.
[2] Southern Comments at 4.

damaged on the source side of such line circuit breaker/reclosers. Control by separate and dedicated paths such as MAS, fiber optic cable, and telco lease line are necessary so that these reclosers and other stored energy operated switches can be operated while the power is off to attempt to restore the system by reconfiguration. Reliance on BPL for important system control is inviting not an enhancement of service reliability, but a degradation.

5. Power quality monitoring to control system frequency, power factor, voltage and load already exists at points where meaningful changes can be made without interruption or disturbance to customers. Locations such as generating stations and transmission and distribution substations. Backbone fiber and microwave systems are already in place and, in fact, are what utilities want to capitalize on to extend to permit injection of BPL on distribution lines.

6. Automated meter reading already exists to a great extent, using portable and mobile instrumentation. The cost to read meters is typically about 10 cents per reading. The idea of adapting BPL to accomplish replacement of such an inexpensive task is ludicrous. Customer utilization voltage will be within the plus or minus 10 percent of ANSI utilization voltage which all electrical equipment must meet, if the electric utility system has been properly designed and is properly configured.

7. Southern claims that BPL will be the essential link for security systems in the surveillance of utility properties such as steam plants, electric substations, and office buildings.[3] Why would it be necessary to use an inferior, less-secure path

[3] Southern Comments at P5.

when all generating stations, all substations, and most important office facilities already have utility-owned broadband access through fiber optic or microwave radio systems? Apparently the person making this claim on behalf of Southern is not at all familiar with electric utility infrastructure. Making such a proposition is akin to exchanging an outhouse for inside plumbing.

8. The data and opinions expressed above are largely based upon over 29 years of my professional experience as an Electrical Engineer in power utility and industrial power systems. Experience that includes distribution system planning and design, system operation and management. It is also based upon my pre-professional experience as a radio technician and broadcast engineer, having held a First Class Radiotelephone license since 1966. I am a Registered Professional Electrical Engineer in the states of California and Florida and am a Senior Member of the Institute of Electrical and Electronic Engineers and have both Bachelors and Masters Degrees in Electrical Engineering.

Respectfully Submitted,

/s/

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